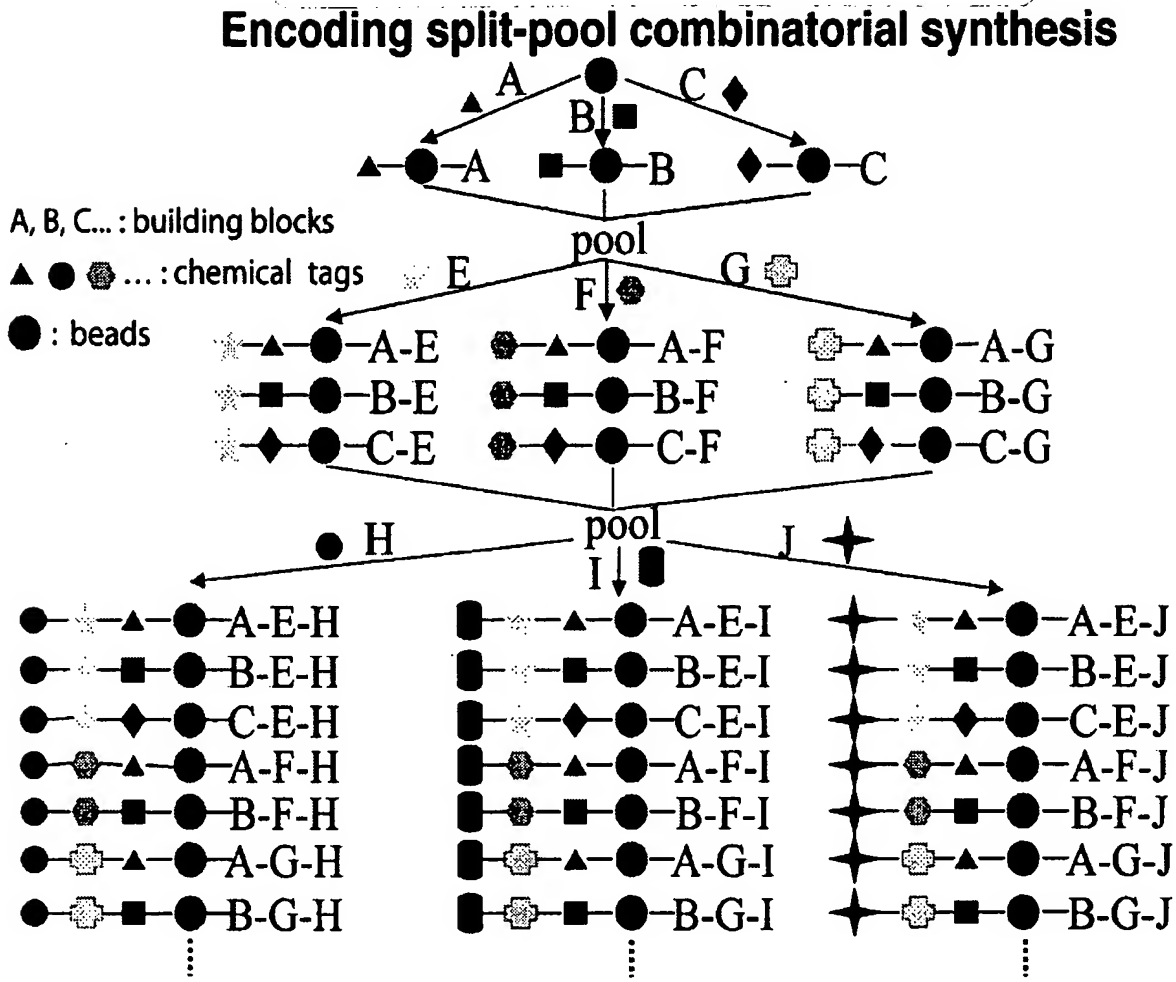

Encoding split-pool combinatorial synthesis
A, B, C... : building blocks
... : chemical tags
: beads
A
B
C
pool
E
F
G
A-E
A-F
A-G
B-E
B-F
B-G
C-E
C-F
C-G
pool
H
I
J
A-E-H
B-E-H
C-E-H
A-F-H
B-F-H
A-G-H
B-G-H
A-E-I
B-E-I
C-E-I
A-F-I
B-F-I
A-G-I
B-G-I
A-E-J
B-E-J
C-E-J
A-F-J
B-F-J
A-G-J
B-G-J

FIG. 1

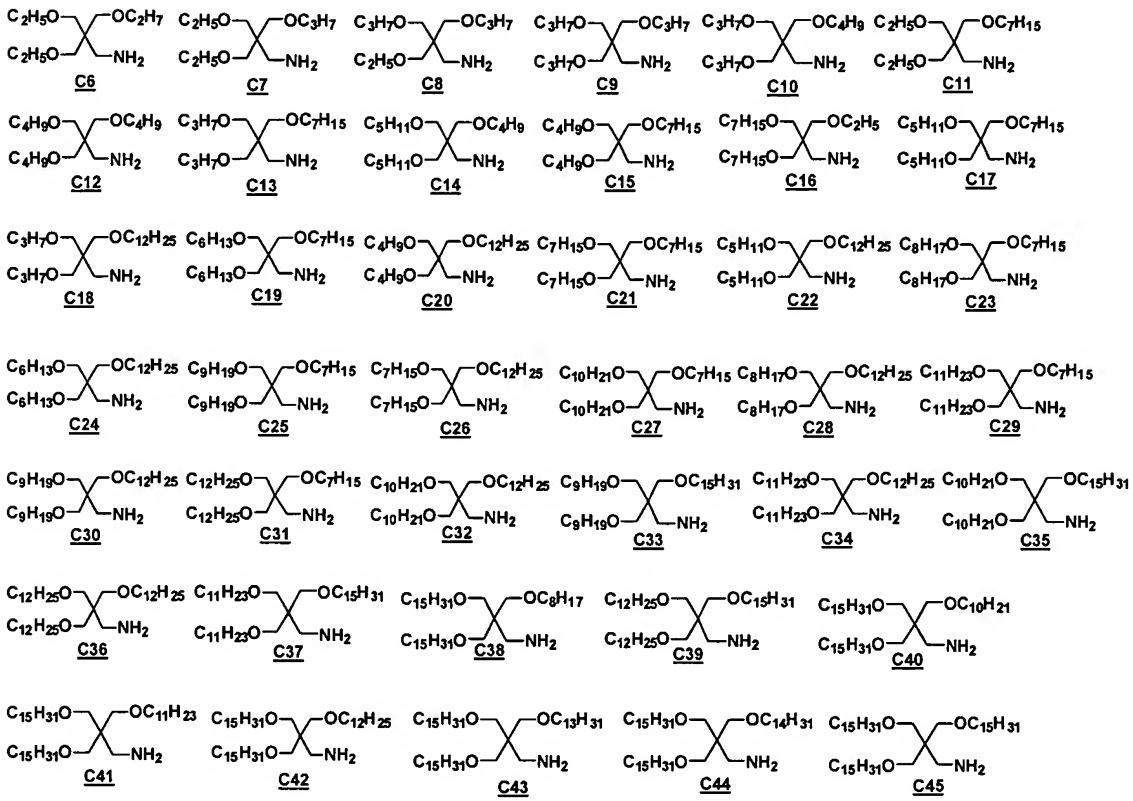

C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
C33
C34
C35
C36
C37
C38
C39
C40
C41
C42
C43
C44
C45

FIG. 2

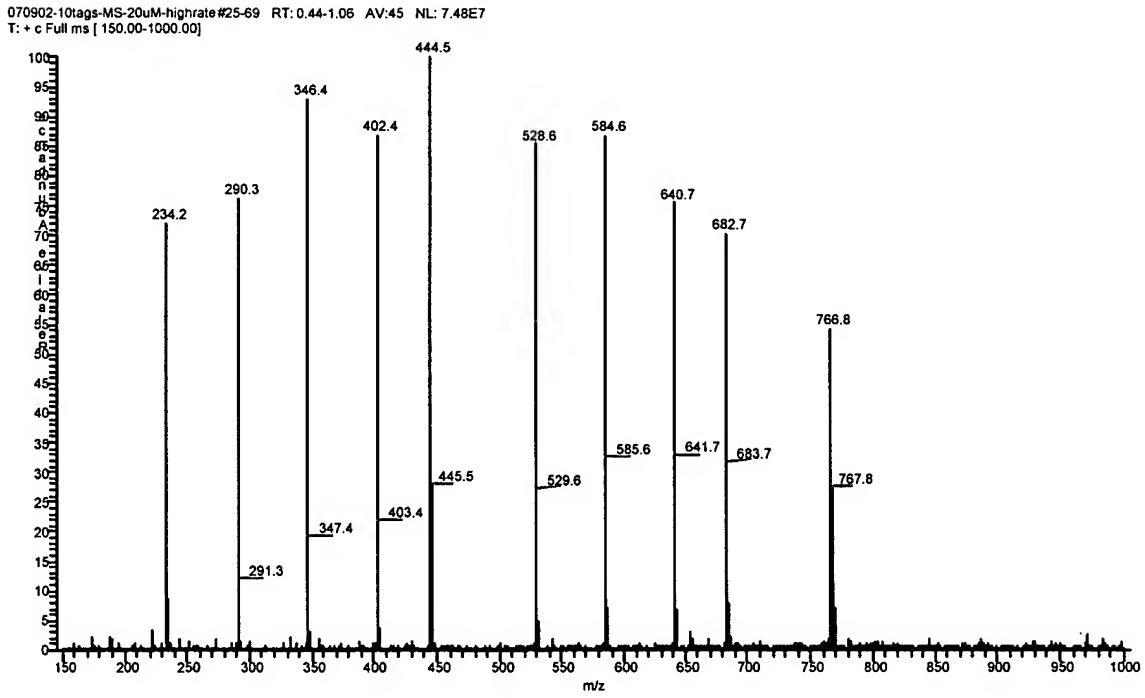

070902-10tags-MS-20uM-highrate#25-69 RT: 0.44-1.06 AV:45 NL: 7.48E7
T: + c Full ms [150.00-1000.00]
444.5
346.4
402.4
528.6
584.6
290.3
640.7
234.2
682.7
766.8
585.6
641.7
683.7
445.5
529.6
767.8
403.4
347.4
291.3
m/z

FIG. 3

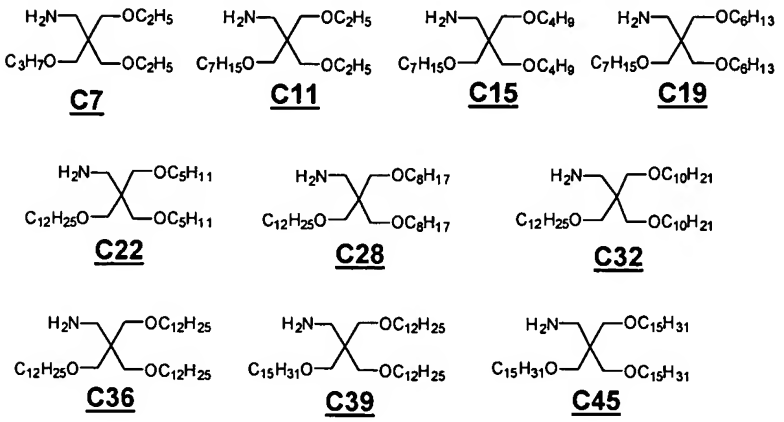

H2N
OC2H5
C3H7O
OC2H5
C7
H2N
OC2H5
C7H15O
OC2H5
C11
H2N
OC4H9
C7H15O
OC4H9
C15
H2N
OC6H13
C7H15O
OC6H13
C19
H2N
OC5H11
C12H25O
OC5H11
C22
H2N
OC8H17
C12H25O
OC8H17
C28
H2N
OC10H21
C12H25O
OC10H21
C32
H2N
OC12H25
C12H25O
OC12H25
C36
H2N
OC12H25
C15H31O
OC12H25
C39
H2N
OC15H31
C15H31O
OC15H31
C45

FIG. 4

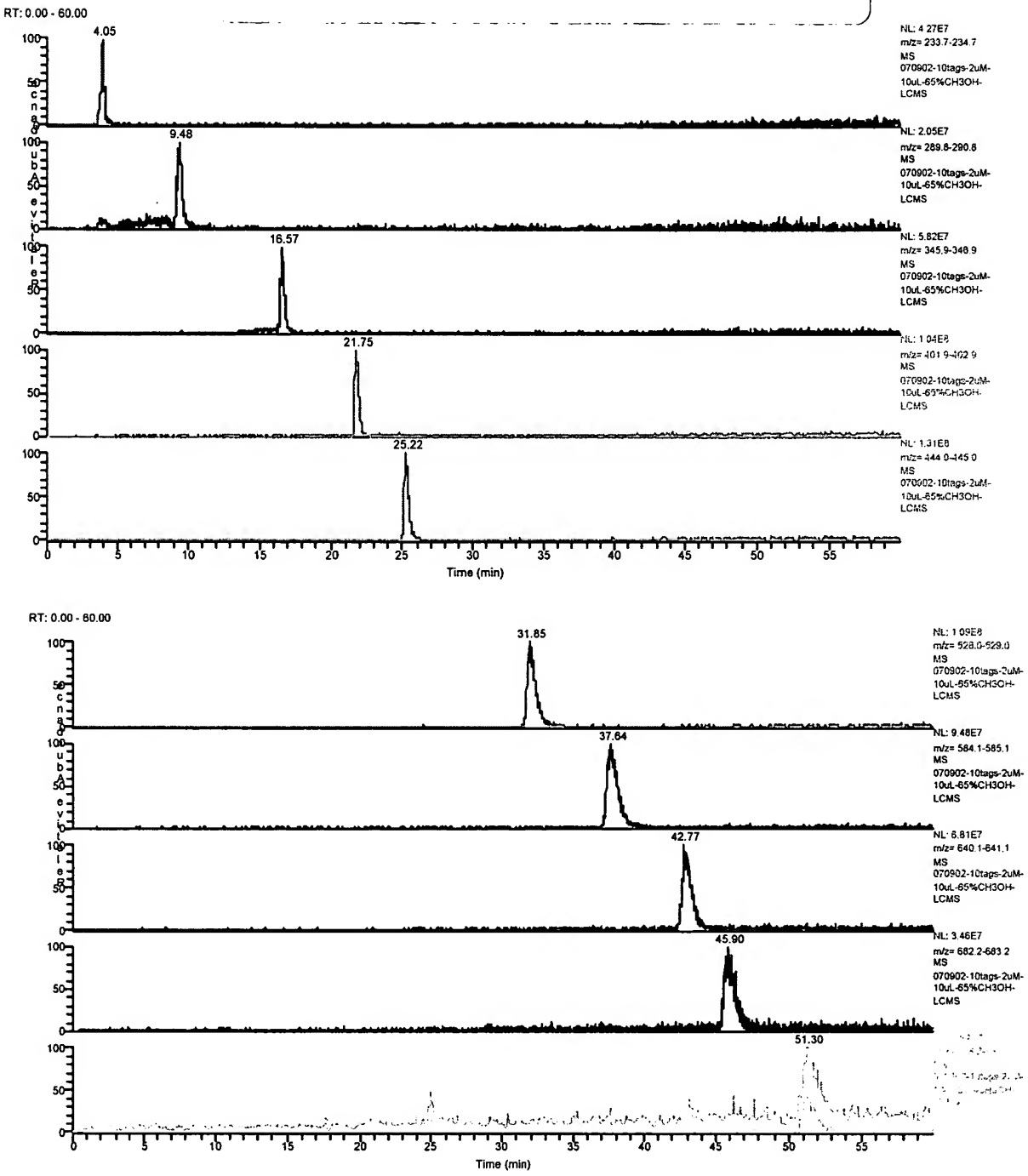

RT: 0.00 - 60.00
4.05
9.48
16.57
21.75
25.22
NL: 4.27E7
m/z= 233.7-234.7
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 2.05E7
m/z= 289.8-290.8
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 5.82E7
m/z= 345.9-346.9
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 1.04E8
m/z= 401.9-402.9
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 1.31E8
m/z= 444.0-445.0
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
Time (min)
RT: 0.00 - 60.00
31.85
37.64
42.77
45.90
51.30
NL: 1.09E8
m/z= 528.0-529.0
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 9.48E7
m/z= 584.1-585.1
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 6.81E7
m/z= 640.1-641.1
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
NL: 3.46E7
m/z= 682.2-683.2
MS
070902-10tags-2uM-10uL-65%CH3OH-LCMS
Time (min)

FIG. 5

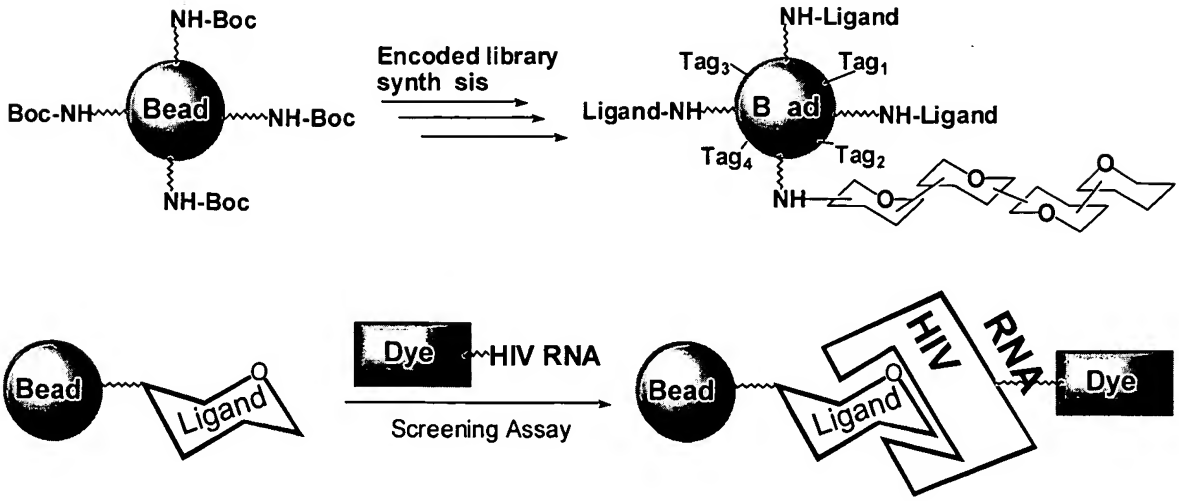
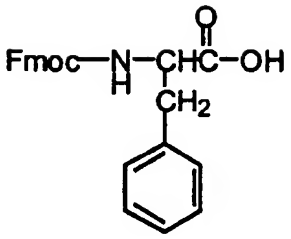
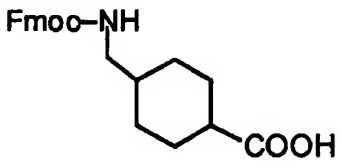

NH-Boc
Boc-NH
Bead
NH-Boc
NH-Boc
Encoded library
synth sis
NH-Ligand
Tag3
Tag1
Ligand-NH
B ad
NH-Ligand
Tag4
Tag2
NH
O
Bead
Ligand
Dye
HIV RNA
Screening Assay
Bead
Ligand
HIV
RNA
Dye

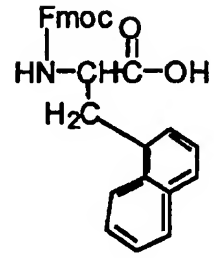
FIG. 6



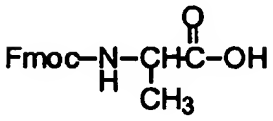
Fmoc-L-Phe-OH



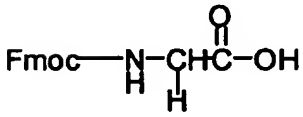
Fmoc-Amc-OH



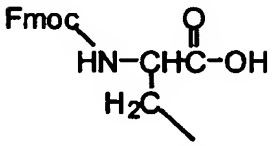
Fmoc-L-1-Nal-OH



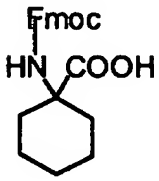
Fmoc-Ala-OH



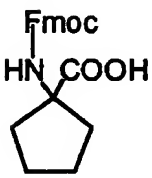
Fmoc-Gly-OH



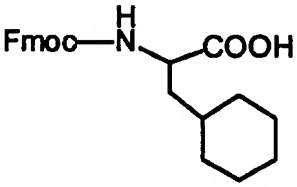
Fmoc-2-Abu-OH



Fmoc-Ac6c-OH



Fmoc-Ac5c-OH



Fmoc-Cha-OH

FIG. 7